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Mediatized Opinion Leaders: New Patterns of Opinion Leadership in New Media Environments?

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The study analyzes which forms opinion leadership takes in contemporary media environments where communication channels have increased and started to permeate interpersonal interaction. Some scholars assume that opinion leadership becomes more important under these conditions, as more media are available to enact it, and that more orientation is needed. Others argue that opinion leadership loses its importance as online media target audiences directly without interaction from opinion leaders. This study demonstrates that opinion leadership still exists in contemporary media environments. Using a cluster analysis of German online survey data, three clusters were identified that resemble communicative roles from earlier studies: Opinion Leaders, Followers, and Inactives. An additional fourth cluster, Mediatized Opinion Leaders, was also found. Individuals in this cluster exhibit the strongest and most diverse use of media and communication channels both for informing themselves and for communicating with followers.

Keywords: opinion leadership, mediatization, interpersonal communication. mass media, social media

Introduction

Media environments have changed significantly in recent decades. People currently have a much larger number of media channels available for communication, from traditional mass media such as

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newspapers, radio, or television to a multitude of online and social media. The number of sources as well as the amount and range of information available on practically all issues are vast. Additionally, mediated and interpersonal communication have become increasingly interlinked—symbolized by the advent of ever-present tablet computers and smartphones.

These changes have manifold implications in the social world, and might necessitate corresponding changes in the social sciences, i.e. among the professional observers of the social world. Among social scientists, they require conceptual reflection and methodological advances, and this article aims to contribute to both. It analyses whether new forms of opinion leadership emerge in new media environments, thus placing one of the best-known concepts of communication science in a new context.

Changing Media Environments, Changing Opinion Leadership?

The conceptual foundation of opinion leadership is the idea that communication flows are segmented and that participants can be divided into different communicative roles, with some providing information or orientation and others following. Nevertheless, the concept has undergone a number of changes throughout its 70-year history. The initial idea of a "two-step flow" of communication proposed by Paul Lazarsfeld, Bernard Berelson, and Hazel Gaudet (1944) triggered a flurry of follow-up studies—from the classical "Rovere" (Merton, 1949), "Decatur" (Katz & Lazarsfeld, 1955), and "Drug" (Coleman, Katz, & Menzel, 1957) studies all the way to diffusion research (Rogers, 2003) and network analyses (Weimann, 1982).

These studies went beyond the original concept in various ways. First, they showed that while opinion leaders cannot be clearly situated demographically and exist in various social strata and milieus (e.g., Hamilton, 1971), they are more interested in a given issue compared to followers, know more about the issue, tend to use mass media for information more often (Myers & Robertson, 1972; Schenk, 1985; Troldahl & van Dam, 1965), and have stronger personalities (Schenk & Rössler, 1997) as well as larger and more diverse social networks (Katz & Lazarsfeld, 1955; Reynolds & Darden, 1971; for a recent review of the literature, see Trepte & Scherer, 2010). Second, they found not just two-step flows but multistep flows of communication (first in Katz & Lazarsfeld, 1955, p. 343), within which ideas are passed on in various steps with different degrees of influence between the communicators (e.g., Rogers, 2003). Third, the studies demonstrated that the communicative roles existing in opinion leadership are more differentiated than initially imagined. Opinion leaders differ in the scope of the issues about which they provide leadership, ranging from "cosmopolitans" (oriented toward the larger society) to "locals" (oriented toward local issues) (Merton, 1949). They also vary in the number of issues over which they lead, with "monomorphic" opinion leaders having one specific area of leadership and "polymorphic" ones functioning as opinion leaders across topics (Merton, 1949). Opinion leaders also differ in how proactively they provide their ideas, with some being asked for their advice and others readily providing it themselves (Troldahl & van Dam, 1965). Fourth, it was established that, apart from opinion leaders and followers, "inactives" exist who do not seek out or receive advice from others on a given topic (Robinson, 1976; Troldahl & van Dam, 1965).

Current developments may change the nature of opinion leadership and may make further adaptations of the concept necessary. Of particular importance in this respect is the increasing "mediatization" of the social world—an ongoing "meta-process" (Krotz, 2009) of social change during which the number of available media in social interactions, their use among individuals, and, allegedly, their influence on these individuals has risen considerably (e.g., Hjarvard, 2008; Krotz, 2001; Livingstone, 2009; Lundby, 2009). From the perspective of opinion leadership, the continuous intermingling of formerly separate modes of communication in interactive online media—and especially on social media platforms—is of particular relevance. Mobile communication and social media have become ingrained in social relations and have altered interpersonal communication significantly. The increasing number of channels for communication, the broader range of information and opinion that is offered there, and the growing complexity of interlinkages between the available channels are likely to have a profound influence on the ways in which individuals find, select, and evaluate content.

These potential changes have to be assessed empirically in order to see whether they present a challenge to the concept of opinion leadership. They have not been integrated into the concept in recent years, partly because most recent studies on opinion leadership originated from information and computer sciences and focused mostly on applying the existing concept of opinion leadership to complex databases such as libraries (e.g., Case, Johnson, Andrews, Allard, & Kelly, 2004) or social networking sites (e.g., Choi, Cha, & Han, 2010; Gao, Zhang, Jiang, & Wang, 2005) and were less concerned with conceptual advances.

Therefore, the question is still unanswered as to if, and how, opinion leadership changes when social relations, which were mainly face-to-face relations when the concept emerged and gained in prominence, are complemented and possibly even substituted by mediatized communication via smartphones, social networking sites, Twitter, and the like (cf. Fuhse, 2011). When such mediatized communication penetrates interpersonal communication and interaction with family and friends—which protects "opinion followers" from media effects in the classic model of opinion leadership (cf. Gehrau, 2011, p. 22)—it may have an impact on the nature of opinion leadership itself. Therefore, the configuration of opinion leadership in potentially new forms in this new media environment must be explored both empirically and conceptually.

Some communication scholars have put forward hypotheses as to how to answer this question, but their answers differ considerably. A number of scholars have argued that opinion leadership might become more relevant and important in changing media environments. After all, the growing number of available media sources, as well as their increasing interconnectedness, makes necessary more, and more complex choices, for which advice and orientation might be helpful (van der Merwe & van Heerden, 2009, p. 65). In addition, opinion leaders might now be even better equipped to offer advice and orientation for these choices by providing information and opinion more efficiently and effectively via blogs (Kavanaugh et al., 2006; Kavanaugh et al., 2007), Twitter (Said Hung & Arcila Calderon, 2011), and especially as a result of a combination of multiple modes of communication (e.g., Erdal, 2011; Kress & van Leeuwen,

2001).[2] In contrast, others have argued that opinion leadership might lose its importance. As the Internet and particularly social media communication can be specifically targeted at their audiences, fragmented publics and isolated individuals could henceforth be addressed directly and without the links through opinion leaders. The result might be a "one-step flow" of communication (Bennett & Manheim, 2006).

The empirical basis for assessing and validating these contradicting hypotheses is still unsatisfactory. This is not due to a general lack of studies, however, as opinion leadership has been the object of numerous works in recent years. Rather, the abovementioned hypotheses are difficult to assess because recent studies often exhibit conceptual shortcomings.

First, many limit their scope to single media, focusing on Weblogs (Java, Kolari, Finin, Joshi, & Oates, 2007; Ko, Yin, & Kuo, 2008), Twitter (Geser, 2010), online discussion forums (Matsumura, Ohsawa, & Ishizuka, 2002), or mailing lists (Stegbauer, 2001) only. By design, such studies are unable to reconstruct communication patterns and forms of opinion leadership that span across different media or properly assess the relevance and interplay of mediated and nonmediated communication.

Second, many studies focus on the role of opinion leaders only and neglect the more complex, relational nature of opinion leadership. A number of scholarly works on product marketing and consumer behavior (e.g., Acar & Polonsky, 2007; Fei, Jianliang, & Qinghua, 2011; Lam & Wu, 2009; Li & Du, 2011; Litvin, Goldsmith, & Pan, 2008; Tsang & Zhou, 2005), as well as studies aiming to identify opinion leaders in complex information systems (Case et al., 2004) or social media (Bodendorf & Kaiser, 2010; Choi et al., 2010; Gao et al., 2005), limit themselves to the identification of potential opinion leaders and the description of their psychological or sociodemographic profiles. Effects of these opinion leaders on others are often only assumed, such as when indicators such as hyperlinks are directed toward them or clicks on their profiles are seen as sufficient measures of influence (e.g., Java et al., 2007; Zimbra, Fu, & Li, 2009). The fundamentally social character of opinion leadership—as a relation between individuals—is not properly addressed in these works.

Both limitations—the focus on single media as well as the limited perspective on only one side of the social relation that is opinion leadership—will be remedied here. The study analyzes which forms of opinion leadership can be found in new, mediatized media environments. More specifically, it focuses on three research questions:

RQ1: What communicative roles can be found in opinion leadership under changed media conditions?

RQ2: To what extent is opinion leadership itself enacted via media, i.e., to what extent it is "mediatized"?

RQ2: To what extent are communicative roles still associated with the characteristics of opinion leaders, opinion followers, and inactives that were found in previous studies?

[2] Taking this argument to a metalevel, some scholars also point out that the large supply of opinion leaders online itself might make metaopinion leaders—"apomediaries" (Tsang & Zhou, 2005)—necessary and able to provide orientation for selecting opinion leaders.

Data and Methods

To answer these questions, an empirical analysis is presented. It covers individuals' information and communication patterns across different media, from mass media like TV or newspapers to media of interpersonal communication such as text messages or e-mails; the analysis also includes nonmediated methods of interpersonal, face-to-face communication. Moreover, the analysis will move beyond the focus on opinion leaders only and aims to model opinion leadership as a social relation.

Procedure

An online representative survey conducted in 2012 asked for information and opinion-gathering behavior on four different topics (similar to Katz & Lazarsfeld, 1955, who also analyzed various topics): retirement provisions, educational policy, climate change, and fashion/style. These issues were chosen because all of them exhibit (albeit somewhat different) levels of complexity and closeness to daily routine. A question on the perceived relevance of each issue was included at the beginning of the questionnaire to ensure a minimum level of interest and involvement for at least one of the topics among the survey respondents. Thus, participants for whom none of these issues was at least of medium importance (≤3 on a scale of 1, "not important at all," to 5, "very important") were screened out. Subsequent questions always referred to the topic that was most important for the participant. The topic was randomly selected if two or more issues were described as equally important by respondents.

Table 1. Description of the Sample.

	Survey	German Internet Users[1]
Gender		
Male	50.2%	52.9%
Female	49.8%	47.1%
Age group		
16–29 years	17.3%	29.0%[2]
30–39 years	17.5%	18.4%
40–49 years	26.8%	23.2%
50 years and older	38.4%	29.3%
Education[3]		
No certificate or certificate of secondary education	48.5%	55.6%
University entrance level	50.2%	34.3%

[1] According to AGOF (2012).

[2] Age group of 14–29 years.

[3] Percentages missing to 100 are "others" and "not specified."

Participants

This study employed a representative sample of German Internet users within an online access panel by using quota for sex, age, and federal state (Bundesland). With this, a gross sample of n = 2,578 was realized. After screen-outs (n = 446, 16%) and data cleansing (based on a time threshold as well as a number-of-missing-values threshold, n = 479, 18.6%), the final sample size was n = 1,756 (Table 1). Participants were classified by their self-indicated relevance of the topic in question into four different groups (Table 2). Group sizes and means are comparable, although fashion/style was perceived as gradually less important overall.

Table 2. Size of Groups Related to Topics

	Group size		Average relevance of topic (Standard deviation)
	N	%	
Climate Change	509	29.0	4.45 (.643)
Retirement Provisions	443	25.2	4.47 (.617)
Educational Policy	419	23.9	4.48 (.624)
Fashion and Style	385	21.9	3.94 (.787)

Measures

To analyze the abovementioned research questions, the following measures were applied in the questionnaire.

Opinion leadership. In the long tradition of empirical research on opinion leadership, different scales were developed based on the original idea of operationalizing opinion leaders by convincing others and being asked for advice. Rogers and Cartano (1962) presented an altered and expanded version asking for the respondent's self-image as an opinion leader and a perception of past behavior when interacting with others. The most recent scale in this tradition was introduced by Childers (1986). His revised scale consists of six items on the role of topic-related communication, such as being asked for information or leading a discussion (see Appendix). It has been found to be an internally consistent measurement of opinion leadership (e.g., Goldsmith & Desborde, 1991; Trepte & Scherer, 2010).

Personality strength. Similar to the concept of opinion leadership, Noelle-Neumann (1983) developed a personality strength scale to assess the ability to influence other people (see Appendix). Here, items asking for self-appraisal regarding giving advice and being a source of information are included. Additionally, items that measure the psychological trait extraversion and behavioral references (e.g., whether respondents participate in a political party or hold organizational offices) are part of the scale. Whereas the opinion leadership scale from Childers is related to one specific topic, personality

strength is measured on a general level (Trepte & Scherer, 2010; Weimann, 1994). Therefore, this scale is applied here.

Relational opinion leadership. In order to appropriately measure the relational nature of opinion leadership, the survey borrowed from egocentric network analysis: Respondents were asked to identify the three people with whom they communicate most often about the issue at hand and to characterize their relationships to these individuals regarding the frequency of giving and receiving advice on this subject (1, "I only give advice," to 5, "I only receive advice," with 3 being "It is balanced equally"). In order to consider the individual's level in the analysis, it was necessary to recalculate these variables. The 5-point scale was recoded into three values: opinion leader (1, 2), follower (4, 5), and balanced relationship (3). Then the number of relationships in which the respondent functioned as an opinion leader were counted, as were the numbers of relationships in which he or she was a follower or relationship that were balanced. In this way, three new variables were introduced that describe the relationships from the respondent's perspective: the number of times he or she was an opinion leader in the named relationships, the number of times he or she was a follower, and the number of time he or she was in a balanced relationship, each with values between 0 and 3.

Relational media use. Moreover, respondents were asked to specify which modes of communication and/or media they regularly use to interact with each of the three people. For this, a 6-point scale ranging from "daily" to "never" was used to capture the various modes, which included face-to-face, phone, short messages, e-mail, instant messenger, discussion forums, social networking sites, Voice-over-IP services (e.g., Skype), blogs, and microblogs (e.g., Twitter). However, for the data analysis, it was again necessary to change the relational perspective to the respondent's perspective. However, as media use was conducted with frequencies, the means of up to three scores (for each named relationship) were calculated. Means were then used to calculate an exploratory factor analysis. For this, face-to-face communication was omitted from the analysis because it is the only modus that is not mediated. Using all other variables, two factors were identified: interpersonal communication and Internet communication, which represent the frequency and breadth of channels within the factors (see Table A-1 in Appendix). Interestingly, e-mail use was clearly associated with interpersonal communication. Values of Cronbach's alpha were adequate (F1: $\alpha = 0.91$, F2: $\alpha = 0.73$).

Informational media use. In addition to relational variables, the survey also asked to what extent respondents use media to gather issue-related information. Altogether, answers with regards to 13 different media sources ranging from public-service television to Twitter were acquired. The abovementioned 6-point scale ranging from "daily" to "never" was used again. By calculating an exploratory factor analysis, three factors were identified: use of Internet, TV/radio, and print—all three again representing the frequency as well as the breadth of channels used for information (see Table A-2 in Appendix). Values of Cronbach's alpha were adequate (F1: $\alpha = 0.75$, F2: $\alpha = 0.88$, F3: $\alpha = 0.85$).

Interest in topic. The level of interest in the topic in question was measured with seven ad hoc items, such as "I am interested in more information about this topic," "I want to know details about this topic," and "I often think about this topic." A 5-point answer scale was applied (1, "I don't agree at all"; to 5, "I totally agree"), and a single-value index calculated by means was used for the analyses.

Description of peer group. As explained above, the relational perspective should be taken into account when researching the concept of opinion leadership. Thus, respondents were asked to describe their peer group regarding topic-related knowledge levels and opinions as well as size and heterogeneity. The level of topic-related knowledge was asked in comparison to the respondent: "Compared to the level of knowledge about . . . of your peers: Do you know more or less?" (a 5-point scale was used, ranging from 1, "I know less," to 5, "I know more"). Similar to this, the heterogeneity of opinions was assessed as follows: "Do your peers have the same or different opinions on . . .?" (5-point scale with 1, "mostly the same opinion," to 5, "mostly a different opinion").

Size and heterogeneity of peer group. The size and the heterogeneity of the respective peer groups were measured with the respondents' level of agreement to the statements "I have many friends" and "My friends are very different people" (1, "I don't agree at all" to 5, "I totally agree"). The size of the online network was measured with two items ("I also use the Internet to be in contact with others" and "I don't know many of my online contacts personally"; 1, "I don't agree at all," to 5, "I totally agree").

Data Analysis

A hierarchical cluster analysis was conducted (ward treatment, squared Euclidian distance, z-transformed variables) using the variables of individual relational opinion leadership, individual relational media use, and informational media. The distance coefficient indicated that a solution of four clusters would be best. Differences between the clusters were calculated with variance analyses and posthoc (Scheffé) tests. Almost all differences between clusters were significant, even though considerable differences were found in the number of respondents assigned to the four clusters.

(Mediatized) Opinion Leaders and Their Characteristics—Findings

Roles in Opinion Leadership (RQ1) and Their Media Use (RQ2)

The first research question asked which communicative roles can be found in opinion leadership relations and to what extent they mirror the roles found in previous research. The first finding in this regard is that the classical roles identified in earlier research were again found among the clusters identified here.

The first cluster clearly consists of Opinion Leaders. Compared to the clusters of Followers and Inactives, they are the ones who most often give advice to other people (relational opinion leadership). When cross-checked with other measures of opinion leadership, this distinction holds true as well: The identified Opinion Leaders score significantly higher on the Childers scale and have higher scores on the personality strength scale[3] than Followers and Inactives, further validating them as opinion leaders. Accordingly, it can be concluded that the innovative measurement of opinion leadership found by applying a relational perspective corresponds well with more traditional scales.

[3] As explained above, this scale measures an issue-nonrelated personality trait that can be related to opinion leadership.

When analyzing media use among these groups, it becomes clear that Opinion Leaders communicate most often about the issues that they say are relevant to them; that they do so both in nonmediated, face-to-face communication and in mediated, interpersonal communication (such as via mobile phone); and that they are the most frequent users of all kinds of mass media for information-seeking. Interestingly, although differences in relational, face-to-face, and interpersonal media use were statistically significant as well, the differences regarding informational media use were considerably larger. Thus, even though Opinion Leaders differ from Followers and Inactives in how often they communicate about topics, they particularly diverge from these other clusters in that they inform themselves more often about the topic at hand by using different types of media.

Looking at cluster sizes, the cluster of Opinion Leaders—consisting of 641 respondents—is the largest. At first glance, this may seem surprising, but it can certainly be explained by the threshold of the medium-interest level that was introduced in the survey. It is safe to assume that groups of Followers (248 respondents) and Inactives (561 respondents) would have been considerably larger had less interested people also been asked.

These three clusters represent the established communicative roles of opinion leadership seen in previous studies. However, the analysis identified a fourth cluster that had not previously been found that represents an additional, presumably new communicative role in opinion leadership. We propose calling this group "Mediatized Opinion Leaders" for two reasons. First, respondents in this cluster indicate that they function as an advisor in their social relationships even more often than regular opinion leaders. Moreover, they average even higher scores on the Childers scale and display significantly higher averages in the personality strength scale when compared to all other groups. Thus, Mediatized Opinion Leaders seem to be individuals with a significantly higher level of self-confidence and extraversion who are more willing to guide and lead than other opinion leaders. Second, they are named Mediatized Opinion Leaders because of their considerable use of media for communicative exchange and information, particularly with regard to all types of online communication. Mediatized Opinion Leaders do not only use media more often to get information about a topic of interest; they also employ different media significantly more often in their interpersonal interactions that center on the topic in question.

Table 3. Description of Clusters by means of Opinion Leadership and Media Use.

		Opinion Leader	Follower	Inactive	Mediatized Opinion Leader
N		641	248	561	112
Opinion leadership (Childers)		3.36 $_{abc}$	2.88 $_{ce}$	2.83 $_{ad}$	3.75 $_{bde}$
Personality strength		88.56 $_{ab}$	80.78 $_{c}$	75.99 $_{ad}$	105.73 $_{bcd}$
Relational opinion leadership[1]	# opinion leaderships	0.88 $_{ab}$	0.41 $_{bde}$	0.14 $_{acd}$	1.07 $_{ce}$
	# follower	0.10 $_{ab}$	1.37 $_{bde}$	0.01 $_{acd}$	0.18 $_{ce}$
	# balanced	0.69 $_{abc}$	1.20 $_{cg}$	1.29 $_{ad}$	0.62 $_{bdg}$
Individual relational media use[2]	F2f	3.66 $_{abc}$	3.27 $_{ce}$	3.17 $_{ad}$	4.58 $_{bde}$
	Interpersonal	2.75 $_{abc}$	2.43 $_{ce}$	2.27 $_{ad}$	4.23 $_{bde}$
	Internet	1.21 $_{a}$	1.18 $_{c}$	1.15 $_{b}$	3.55 $_{abc}$
Informational media use[3]	TV/radio	4.33 $_{abg}$	2.81 $_{bdh}$	2.52 $_{ach}$	4.69 $_{cdg}$
	Print	3.67 $_{abc}$	2.50 $_{ce}$	2.31 $_{ad}$	4.35 $_{bde}$
	Internet	2.43 $_{abc}$	1.75 $_{cef}$	1.49 $_{ade}$	4.20 $_{bdf}$

[1] Mean indicates number of relationships—out of a total of three—in which respondents are opinion leaders, followers, and in which these roles are balanced; may range from 0 to 3 relationships.

[2] Means indicate frequency and breadth of channels of media use to interact with peers.

[3] These variables indicate the frequency and breadth of channels of media use for information. The higher the scores, the higher the level. Means in the same row that share subscripts differ at $p < .01$ in the posthoc test (Scheffé).

Further Characteristics of Opinion Leaders, Followers, and Inactives (RQ3)

In previous research, communicative roles in opinion leadership were conceptually expected and empirically found to differ (a) in their levels of interest and knowledge on the issue in question, (b) in their social networks, and (c) in their sociodemographic characteristics (e.g., Katz, 1957; Katz & Lazarsfeld, 1955; Schenk & Rössler, 1997; Troldahl & van Dam, 1965). Similar differences are also visible when comparing the clusters identified here.

First, the four clusters differ in their levels of both interest and knowledge concerning the issue in question (Table 4). Both groups of opinion leaders are significantly more interested in the respective topics, with Mediatized Opinion Leaders having the highest level of interest. In addition, it should be kept in mind that the levels of interest among Followers and Inactives, respectively, would have been much lower had the survey not included a threshold of minimum interest. Respondents were asked to compare their levels of knowledge on specific issues to the level of knowledge they perceive to exist among their friends. Both groups of opinion leaders perceive themselves as being on a more expert level than their friends, while Followers and Inactives—on average—think their friends are better informed about the respective issues than they themselves are.

Table 4. Description of Clusters by means of Opinion Leadership Scales and Interest.

	Opinion Leader	Follower	Inactive	Mediatized Opinion Leader
N	641	248	561	112
Interest in topic[1]	3.84 $_{abg}$	3.57 $_{bde}$	3.33 $_{acd}$	4.12 $_{ceg}$
Relative level of knowledge[2]	3.62 $_{a}$	2.97 $_{ab}$	3.19 $_{b}$	3.79 $_{ab}$

[1] Mean indicates index value on a scale from 1 ("No interest in topic") to 5 ("Very strong interest in topic").

[2] Mean measured on a scale from 1 ("I know less [than my peers about the issue at hand]") to 5 ("I know more"). Means in the same row that share subscripts differ at $p < .01$ in the posthoc test (Scheffé).

Second, additional differences can be found in the size and composition of the social networks of the identified clusters. Respondents were asked to describe their peer groups and compare their opinions on the specific topic to their own. As Table 5 shows, both groups of opinion leaders perceive their friends to share their own opinions, and they have smaller and more homogenous peer groups than the other two clusters—particularly the Mediatized Opinion Leaders. Followers and Inactives, in contrast, indicate that their friends' opinions differ from their own and that their networks are more diverse. Most outstanding is the significance of differences regarding the size of online networks. Mediatized Opinion Leaders in particular have considerably more friends online.

Table 5. Description of Clusters by Means of Variables Describing Peer Group.

	Opinion Leader	Follower	Inactive	Mediatized Opinion Leader
N	641	248	561	112
Opinion heterogeneity in peer group[1]	2.52 $_{ab}$	2.70 $_{bc}$	2.70 $_{ad}$	2.44 $_{cd}$
Size of peer group[2]	2.58 $_{ab}$	2.79 $_{c}$	2.94 $_{ad}$	1.98 $_{bcd}$
Heterogeneity of peer group[3]	1.93 $_{a}$	1.99 $_{aab}$	2.17 $_{abc}$	1.77 $_{c}$
Size of online network[4]	2.54 $_{abg}$	2.32 $_{dg}$	2.23 $_{ac}$	3.69 $_{bcd}$

[1] Mean measured on a scale from 1 (respondent indicates that peers have mostly the same opinion about the issue at hand) to 5 (respondent indicates that peers have mostly a different opinion).

[2] Mean indicates index value on a scale from 1 (small network) to 5 (large network).

[3] Mean measured on a scale from 1 (not very heterogeneous peer group) to 5 (very heterogeneous peer group).

[4] Mean measured on a scale from 1 (small online network) to 5 (large online network). Means in the same row that share subscripts differ at $p < .01$ in the posthoc test (Scheffé).

Third, some differences in sociodemography between the four clusters are discernible. Mediatized Opinion Leaders are relatively young, with more of them being 29 years old or younger, when compared to regular Opinion Leaders. However, most members of both clusters are 50 or older. The percentage of females among Mediatized Opinion Leaders is the highest of all clusters (Table 6). Some of these characteristics may be explained by the distribution of the different communicative roles over the analyzed topics: Most Mediatized Opinion Leaders are found among respondents interested in "Fashion and Style," and they are least prominent among respondents questioned about "Educational Policy."

Table 6. Description of Clusters by Sociodemography and Issues.

		Opinion Leader	Follower	Inactive	Mediatized Opinion Leader
	n	641	248	561	112
Age classes	16–29 yrs	16.7	13.4	37.5	23.0
(in %)***	30–39 yrs	19.5	15.9	18.8	19.4
	40–49 yrs	25.7	28.5	22.3	27.4
	50+ yrs	38.1	42.2	21.4	30.2
Sex	male	52.4	53.7	44.6	43.5
(in %)**	female	47.6	46.3	55.4	56.5
Issues	Climate Change	31.2	24.2	29.8	21.4
(in %)***	Retirement Provisions	27.6	23.8	20.9	18.8
	Educational Policy	21.2	28.6	30.5	10.7
	Fashion and Style	20.0	23.4	18.9	49.1

Note: ***Values differ at $p < .01$ in chi-squared test; ** differ at $p < .05$ in chi-squared test.

Conclusion

This study explored whether the ongoing, fundamental changes in media environments have altered the nature of opinion leadership. Being one of the seminal concepts of communication science for many years, opinion leadership has mainly been used by neighboring disciplines such as economics or information sciences in recent years. Communication science, in turn, has not yet properly analyzed whether old forms and characteristics of opinion leadership still hold true.

Different hypotheses have been put forward regarding these questions. Some scholars assumed that opinion leadership might have become more important in changing media environments because more and better media are available to enact opinion leadership; more advice and orientation are also needed in the face of an overwhelming amount of available information. Others, however, argued that opinion leadership might lose its importance as a result of online and social media specifically targeting audiences in a "one-step flow" of communication (Bennett & Manheim, 2006).

These hypotheses, however, had not yet been tested. This study used data from a survey of German Internet users about their information and communication patterns regarding four complex issues to analyze if opinion leadership still exists and, if so, in what forms. More specifically, it scrutinized what communicative roles can currently be found in opinion leadership; to what extent opinion leadership itself is enacted via media; and whether its once-established communicative roles such as Opinion Leaders, Followers, and Inactives still hold true. In doing so, this study went beyond previous works on opinion leadership by distinguishing between media use for informational purposes and media use to enact opinion leadership (i.e., to give advice to others on relevant yet complex issues). Furthermore, it took the inherently relational nature of opinion leadership into account by borrowing methodologically from network analysis and asking respondents to report upon real exchanges with significant others about a topic relevant to them. Also, it included the full range of communication available to the respondents, including face-to-face-communication and mediated, interpersonal communication (e.g., via phone) as well as online and mass media communication.

The results demonstrate that opinion leadership still exists in contemporary media environments and that a considerable part of it mirrors the characteristics that were established in earlier research. Using cluster analysis, four groups of respondents were identified (see Table 7), three of which closely resemble the communicative roles identified in classical studies. The first group is Opinion Leaders, who often give advice to others when they talk about the issues about which they were surveyed, who are highly interested in these issues and inform themselves thoroughly about them in mass media, who (think they) know more about these issues than their friends, and who have stronger personalities than Followers and Inactives. The second group is Opinion Followers, who most often receive advice from Opinion Leaders in exchanges about the respective issues and do not use mass media for information as often as others. The third group is Inactive respondents, who are not part of opinion leadership relations at all, have the lowest interest in the topic, and are least informed about it.

Table 7. Overview of Communicative Roles of Opinion Leadership in New Media Environments.

	Opinion Leader	Follower	Inactive	Mediatized Opinion Leader
Relational Media Use	Give advice face-to-face or via interpersonal media (phone, text message, e-mail)	Receive advice face-to-face or via interpersonal media (phone, text message, e-mail)	Do not give or receive advice often	Give advice using all channels of communication: face-to-face, interpersonal media and online media
Informational Media Use	Heavily use traditional mass media for information	Do not use mass media or online media often for information	Use mass media as well as online media least often for information	Use mass media as well as online media strongly for information
Characteristics	High interest in topic, more knowledgeable than their friends	Rather high interest in topic, less knowledgeable than their friends	Lowest interest in topic, less knowledgeable than their friends	Very high interest in topic, more knowledgeable than their friends
Social Networks	Small, homogenous social networks with similar opinions	Heterogeneous social networks with different opinions	Heterogeneous social networks with different opinions	Small, homogenous social networks with similar opinions, large share of them online

In addition to these three clusters, a fourth one was found. It represents a new communicative role in opinion leadership that seems to have emerged as media environments have changed: the Mediatized Opinion Leaders. They give advice to others even more often than regular Opinion Leaders and exhibit by far the strongest and most diverse use of media and communication channels. To acquire information about a topic, they use both mass media and online media significantly more often than all other groups. In their opinion leadership relations, they employ face-to-face communication, interpersonal media, and online media significantly more than all other clusters. While these results need to be further validated and solidified in future studies, they point toward a number of interesting implications. First of all, the results have a number of theoretical and empirical implications, the main one being scholars do not need to think about whether opinion leadership still exists in contemporary media environments—it does. Opinion leadership is visible for complex issues across fields, from political matters such as education politics over financial topics such as pensions to scientific issues such as climate change or everyday matters such as fashion. In addition, a specific kind of opinion leaders now has the tools to enact opinion leadership in novel, mediatized, and potentially more powerful ways. As a result, the role of Opinion Leaders needs to be further differentiated: Not only do Opinion Leaders differ in the scope of their thematic expertise between monomorphic and polymorphic—or in their geographic orientation between

cosmopolitan and local—they also differ in the scope of their communication and media use, with some of them using a large number of communication channels intensively, namely the Mediatized Opinion Leaders.

These Opinion Leaders should be more thoroughly scrutinized in the next years. First, it should be analyzed whether, and to what extent, they exist across issues, as the findings presented here indicate that they might be particularly prevalent among some topics—such as fashion and style—and less common among others.

Opinion Leaders' influence should also be assessed in relation to other online and offline sources. Studies should empirically model how often followers' communication environments are structured around (mediatized) opinion leaders instead of mass media programs, what the relative influence of these opinion leaders within these environments is, and to what extent their leadership potential is (or can be) used strategically.

Third, the role of mediatized opinion leaders in the emergence of echo chambers (e.g., Sunstein, 2009) and filter bubbles (Pariser, 2011) should be analyzed. As this study has shown, mediatized opinion leaders are embedded in large but surprisingly homogenous peer groups whose views don't seem to differ much from theirs. Therefore, it is possible that information within these peer groups may become increasingly homogenous in the communication process as well, with deviating issues or views no longer reaching many of the followers. This idea was always inherent in opinion leadership—which provided an umbrella, saving followers from direct media effects (cf. Gehrau, 2011)—but it may become even more pervasive with the mediatization of opinion leadership.

Fourth, future studies should go beyond this one by analyzing what is being said and assessing the importance and influence of mediatized opinion leaders in terms of the content of communication. For this, it might also be interesting to compare how far the content of communication varies and deviates from traditional mass media content as online and social media offer new possibilities to set people's agendas. In this respect, future studies should also analyze what exactly is received from mediatized opinion leaders.

Fifth, longitudinal studies should assess whether opinion leadership becomes more important over time—either because more mediatized opinion leaders arise or because more of the regular opinion leaders become mediatized. After all, the findings presented here indicate that mediatized opinion leaders are particularly influential and that they are relatively young at the same time. Accordingly, their emergence might be interpreted as signaling a generational change within opinion leadership—an assumption that should be monitored.

In addition to these conceptual ramifications, this study also has a number of methodological implications. It has shown that the form of measuring opinion leadership presented here—which asked respondents about their real-life interactions about an issue and thereby aimed to do justice to the relational character of opinion leadership—allows for the identification of diverse communicative roles and, at the same time, corresponds well with traditional measures such as the those of Childers or scales

measuring personality strength. Elaborating on this new, relational measure in standardized research designs would give scholars the chance to acquire more detailed information about the respondents' most important peers and thus enrich the empirical description of opinion leadership relations.

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Appendix

Personality Strength

Noelle-Neumann (1983): "Personality Strength"; translation by Weimann (1994)

A. Self-description

1. I usually count on being successful in everything I do.
2. I am rarely unsure about how I should behave.
3. I like to assume responsibility.
4. I like to take the lead when a group does things together.
5. I enjoy convincing others of my opinions.
6. I often notice that I serve as a model for others.
7. I am good at getting what I want.
8. I am often a step ahead of others.
9. I own many things that others envy.
10. I often give others advice and suggestions.

B. Objective Facts

1. Holder of a leading position in a profession/being superior.
2. Participation in a political party/trade union citizens' action group in leisure time.
3. Office held in a club or organization.

Table A-1. Exploratory Factor Analysis for an Individual's Relational Media Use.

	Factor 1: Internet	**Factor 2: Interpersonal**
Phone		.85
Short messages		.82
E-mail		.63
Instant messenger	.72	
Online discussion forums	.87	
Social networking sites	.67	
Voice-of-IP-service	.84	
Blogs	.93	
Microblogs	.92	
Variance explained	56.1%	15.3%
Cronbach's alpha	.91	.73

Eigenvalue >1.0, rotated (varimax); total variance extracted = 71.5%; Factor loadings >.5 are shown.

Table A-2. Exploratory Factor Analysis for Informational Media Use.

	Factor 1: Internet	**Factor 2: TV/Radio**	**Factor 3: Print**
Public service television		.74	
Private service television		.82	
Radio		.79	
Newspapers			.79
Online newspapers			.71
Magazines			.63
Online news sites	.57		
Social networking sites	.72		
Wikis	.62		
Blogs	.86		
Online discussion forums	.85		
Video platforms	.81		
Microblogs	.77		
Variance explained	46.0%	14.5%	7.0%
Cronbach's alpha	.75	.88	.85

Eigenvalue >.9, rotated (varimax); total variance extracted = 67.5%; Factor loadings >.5 are show